DETAILED ACTION

1. This Supplemental Office Action replaces the Office Action of 10/14/2009 to respond to the RCE of 8/24/2009.

2. Claims 12, 14, 20, 21, 23-25, 30-33, 39, 40, 47, 48, and 52-56 are rejected. Claims 13, 15, 17, 19, 22, 41-46, and 49-51 are objected to.

Continued Examination Under 37 CFR 1.114

3. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/24/2009 has been entered.

Priority

4. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

5. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Drawings

6. The replacement drawings were received on 8/24/2009. These drawings are acceptable.

Claim Objections

7. Claim 46 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 46 which is dependent on claim 45, recites the limitation “the determining means” in line 1, this limitation is not in claim 45.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claim 30 recites the limitation "the measuring device" in line 3. There is insufficient antecedent basis for this limitation in the claim.

10. Claim 52 recites the limitation "the measuring device" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

12. Claims 39, 31, and 40 are rejected under 35 U.S.C. 102(b) as being anticipated by Munshi et al (USP 5,411,537).

Regarding independent claim 39: Munshi et al **(For example: see FIG 2)** discloses a battery charger for a rechargeable battery **(rechargeable lithium battery 92)** of an electronic device, the battery charger comprising:

a charge controller **(88)** configured to charge the rechargeable battery during a first cycle **(charge cycle)**; and a measuring circuit **(90)** configured to measure one or more parametric data **(current level, voltage level)** during the first cycle **(charge cycle)**, and calculate an offset error of the measuring circuit while no load **(offset error is determined by comparing Vn with Vmax and Vmin while periodically testing open circuit)** is placed on the rechargeable battery **(rechargeable lithium battery 92) (For example: see line 43 of col. 11 – line 30 of col. 12)**.

Regarding claim 31: Munshi et al **(For example: see FIG 2)** discloses parametric data **(current level, voltage level)** includes a cumulative amount of charge delivered to the rechargeable battery **(rechargeable lithium battery 92)** during the first cycle **(charge cycle)**.

Regarding claim 40: Munshi et al **(For example: see FIG 2)** discloses an auxiliary power source **(68)** configured to power the electronic device independently of the rechargeable battery **(rechargeable lithium battery 92)**, and configured to power the measuring circuit **(90)** independently of the rechargeable battery **(rechargeable lithium battery 92)**.

13. Claims 12, 14, 20, 47, 48, 55, and 56 are rejected under 35 U.S.C. 102(e) as being anticipated by Meadows et al (USP 6,553,263).

Regarding independent claim 12: Meadows et al **(For example: see FIG 3; Detailed Description of the Invention)** discloses a system for operating a rechargeable battery, said system comprising:

means **(182)** for charging said rechargeable battery to a predetermined maximum voltage **(For example: see line 53 of col. 20 – line 14 of col. 21)**;

means **(160)** for determining a first dynamic charging range **(For example: see line 53 of col. 20 – line 14 of col. 21)** for the rechargeable battery for a first dynamic charging range for a first plurality of charging cycles; and

means **(166, 168)** for calculating an offset error **(trickle charge)** for said determining means **(160, 162, 174)** while there is no more than a relatively low load on the rechargeable battery **(277) (For example: see lines 40-47 of col. 21; low load when battery is discharged below a second prescribed limit; calculation and determination for trickle charge)**.

Regarding claim 14: Meadows et al **(For example: see FIG 9)** discloses determining means **(160, 162, 174)** comprises means **(174)** for integrating a current

signal **(174)** proportional to an amount of current **(For example: see lines 39-47 of col. 10; current value)** delivered to said rechargeable battery.

Regarding claim 20: Meadows et al **(For example: see FIG 9)** discloses predetermined maximum voltage may be dynamically adjusted based on parameters of said rechargeable battery **(277) (predetermined maximum voltage may be dynamically adjusted by adjusting current pulses in convenient increments)**.

Regarding independent claim 47: Meadows et al **(For example: see FIG 9)** discloses a battery charger **(208)** for a rechargeable battery **(277)** of an electronic device, the battery charger **(208)** comprising:

a charge controller **(696)** configured to charge the rechargeable battery during a first cycle; and a measuring circuit **(698)** configured to measure one or more parametric data **(measure charge current)** during the first cycle **(charge cycle)**, and calculate an offset error **(For example: see lines 40-47 of col. 21; low load when battery is discharged below a second prescribed limit; calculation and determination for trickle charge as offset error)** of the measuring circuit **(698)** while no more than a relatively low load is placed on the rechargeable battery **(277) (For example: see lines 40-47 of col. 21; low load when battery is discharged below a second prescribed limit)**.

Regarding claim 48: Meadows et al **(For example: see FIG 9)** discloses an auxiliary power source **(AC Power)** configured to power the electronic device independently of the rechargeable battery **(277)**, and configured to power the measuring circuit **(698)** independently of the rechargeable battery **(277)**.

Regarding claim 55: Meadows et al **(For example: see FIG 9)** discloses parametric data **(selected data including battery status data)** includes a cumulative amount of charge **(For example: see lines 58-63 of col. 10: the power circuits control the charging operation so that only energy that is needed is allowed to charge the battery, thereby preventing overcharging from occurring)** delivered to the rechargeable battery **(277)** during the first cycle **(charge cycle)**.

Regarding claim 56: Meadows et al **(For example: see FIG 9)** discloses the means **(166, 168)** for calculating the offset error calculates the offset error **(trickle charge)** for said determined means **(160)** while there is no load **(zero voltage)** on the rechargeable battery **(277) (zero-volt technology)**.

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

15. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Meadows et al (USP 6,553,263).

Regarding claim 21: Meadows et al discloses the claimed invention except for predetermined maximum voltage being less than 57.6 volts. It would have been obvious to one having ordinary skill in the art at the time the invention was made to operate the battery at predetermined maximum voltage being less than 57.6 volts, since

it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller,* 105 USPQ 233.

16. Claims 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meadows et al (USP 6,553,263) in view of Single (USP 6,922,591).

Regarding claims 23-25: Meadows et al discloses the claimed invention except for said rechargeable battery is used for an implantable medical device which is a receiver/stimulator unit of totally implantable prosthetic hearing implant.

However, Single **(For example: see FIG 1, FIG 2, Abstract)** teaches rechargeable battery **(power supply 43)** is used for an implantable medical device which is a receiver/stimulator unit of totally implantable prosthetic hearing implant **(receiver and stimulator unit 32 of implantable prosthetic hearing implant)**. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the electronic device of Meadows et al to include the implantable medical device as a receiver/stimulator unit of prosthetic hearing implant system by Single for the purpose of providing reliable and safe power source to the implantable medical device **(line 27-35 of col. 4)**.

Additionally, since Meadows et al and Single are both from the same field of endeavor, the purpose disclosed by Single would have been recognized in the pertinent art of Meadows et al.

17. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Munshi et al (USP 5,411,537) in view of Hwang (USP 6,049,210).

Regarding claim 30: Munshi et al fails to disclose measuring circuit is further configured to compensate for any offset error of the measuring device.

However, Hwang **(For example: see FIG 1, FIG 2, lines 25-42 of col. 4)** teaches measuring circuit **(100)** is further configured to compensate for any offset error of the measuring device **(lines 25-42 of col. 4)**. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the battery charger of Munshi et al to include the measuring circuit configured to compensate for any offset error of the measuring device by Hwang et al for the purpose of accurately monitoring the state of charge of the rechargeable battery **(Abstract)**.

Additionally, since Munshi et al and Hwang are both from the same field of endeavor **(battery charging)**, the purpose disclosed by Hwang would have been recognized in the pertinent art of Munshi et al.

18. Claims 32-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Munshi et al (USP 5,411,537) in view of Single (USP 6,922,591).

Regarding claims 32-33: Munshi et al discloses the claimed invention except for said electronic device is an implantable medical device which is a receiver/stimulator unit of prosthetic hearing implant system.

However, Single **(For example: see FIG 1, FIG 2, Abstract)** teaches an implantable medical device which is a receiver/stimulator unit **(receiver and stimulator unit 32)** of prosthetic hearing implant system using battery **(power supply 43)**. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the electronic device of Munshi et al to include the implantable

medical device as a receiver/stimulator unit of prosthetic hearing implant system by Single for the purpose of providing reliable and safe power source to the implantable medical device **(line 27-35 of col. 4)**.

Additionally, since Munshi et al and Single are both from the same field of endeavor, the purpose disclosed by Single would have been recognized in the pertinent art of Munshi et al.

19. Claim 52 is rejected under 35 U.S.C. 103(a) as being unpatentable over Meadows et al (USP 6,553,263) in view of Hwang (USP 6,049,210).

Regarding claim 52: Meadows et al fails to disclose measuring circuit is further configured to compensate for any offset error of the measuring device.

However, Hwang **(For example: see FIG 1, FIG 2, lines 25-42 of col. 4)** teaches measuring circuit **(100)** is further configured to compensate for any offset error of the measuring device **(lines 25-42 of col. 4)**. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the battery charger of Meadows et al to include the measuring circuit configured to compensate for any offset error of the measuring device by Hwang et al for the purpose of accurately monitoring the state of charge of the rechargeable battery **(Hwang: abstract)**.

Additionally, since Munshi et al and Hwang are both from the same field of endeavor **(battery charging)**, the purpose disclosed by Hwang would have been recognized in the pertinent art of Munshi et al.

20. Claims 53-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meadows et al (USP 6,553,263) in view of Single (USP 6,922,591).

Regarding claims 53-54: Meadows et al discloses the claimed invention except for said electronic device is an implantable medical device which is a receiver/stimulator unit of prosthetic hearing implant system.

However, Single **(For example: see FIG 1, FIG 2, Abstract)** teaches an implantable medical device which is a receiver/stimulator unit **(receiver and stimulator unit 32)** of prosthetic hearing implant system using battery **(power supply 43)**. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the electronic device of Meadows et al to include the implantable medical device as a receiver/stimulator unit of prosthetic hearing implant system by Single for the purpose of providing reliable and safe power source to the implantable medical device **(line 27-35 of col. 4)**.

Additionally, since Meadows et al and Single are both from the same field of endeavor, the purpose disclosed by Single would have been recognized in the pertinent art of Meadows et al.

Allowable Subject Matter

12. Claims 13,15, 17, 19, 22, 41-46, and 49-51 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

13. Applicant's arguments with respect to claims 12, 39, and 47 have been considered but are moot in view of the new ground(s) of rejection.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emily Pham whose telephone number is (571)270-3046. The examiner can normally be reached on Mon-Thu (7:00AM - 6:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Monica Lewis can be reached on (571) 272 - 1838. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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